Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

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1. (Original) A data communication control system in a mobile communication system, comprising:

a base station controller and switching system which determines a communication path which selectively provides a voice communication service or a data communication service in response to a call request requested by a calling party, and outputs data and signals which control call connection between the calling party and a called party through the determined communication path; and

a data control system which selectively modulates and demodulates data from said base station controller and switching system by performing protocol communication with said base station controller and switching system.

2. (Original) The data communication control system of claim 1, wherein at least one of the calling party and the called party includes a data terminal which outputs predetermined data, and a communication device connected with the data terminal which transmits the data on a wireless or wire communication network.

3. (Original) The data communication control system of claim 1, wherein said data control system comprises:

a connection device to mobile data which provides a data path for signals and data transmission between a base station and said data control system;

a connection device to public network data which connects a public network of said data control system with a public network of said base station controller and switching system and sets a data traffic path between said data control system and said base station controller and switching system;

a data processing device which performs protocol communication with the base station and selectively modulates and demodulates input data to provide the modulated or demodulated data to the called party or the calling party; and

a main processing device which assigns a resource of said data control system and identifies the state of the resource in response to a data call request of the base station.

4. (Original) The data communication control system of claim 3, further comprising a switching device which switches and controls the resources assigned to said data processing device and said connection device to public network data by a control signal of said main processing device.

5. (Cancelled)

6. (Cancelled)

7. (Original) The data communication control system of claim 1, wherein said data control system identifies the transmission state of said base station controller and switching system and transmits a message which controls an amount of the data to be transmitted to said base station controller and switching system.

8. (Original) A method for controlling a data communication between a calling party and a called party in a communication system having a base station controller and switching system and a data control system, the method comprising the steps of:

determining a communication path in the base station controller and switching system in response to a call request signal of the calling party;

assigning a first modem provided with the data control system and initializing the first modem if a determined result is data communication;

setting a communication path by connecting a second modem provided with the called party with the first modem provided with the data control system; and

performing data communication between the calling party and the called party through the communication path.

9. (Original) The method for controlling a data communication of claim 8, wherein the step of initializing the first modem further comprises the steps of:

transmitting a modem initiation command from the base station controller and switching system to the data control system; and

identifying an unused modem resource occupancy by the data control system and setting a basic value of the first modem.

10. (Original) A method for controlling a data communication between a calling party and a called party in communication system having a base station controller and switching system, a connection device to mobile data for providing a data path for signals and data transmission between the mobile station and the data control system, a connection device to public network data for connecting a public network of the data control system with a public network of the base station controller and switching system and setting a data traffic path between the data control system and the switching system, a data processing device for performing protocol communication with the mobile station and selectively modulating and demodulating input data to provide the modulated or demodulated data to the called party or the calling party, and a main processing device for assigning a resource of the data control system and identifying the state of the resource in response to a data call request of the mobile station, and providing various information for system control to the system user, the method comprising the steps of:

informing arrival of a call setting request message from the base station controller and switching system to the main processing device in response to a call request signal of the calling party;

identifying a type of a call by the main processing device and assigning a modem resource suitable for the type of the call;

performing protocol communication between the data processing device and the calling party using link resources provided between the base station controller and switching system and the connection device to mobile data;

connecting to the called party through a channel resource provided between the base station controller and switching system and the connection device to the public network data, and setting a communication network path based on the connection state; and

performing data communication between the calling party and the called party through the communication path.

11. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication path further comprises the steps of:

requesting a path setting request message in the base station controller and switching system by the connection device to public network data; and

connecting to the public network by the base station controller and switching system and informing the main processing device of the connection result through the connection device to public network data.

12. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication network path further comprises the steps of:

requesting a path setting request message in the connection device to the public network data by the base station controller and switching system; and

setting a data path of the connection device to the public network data and the data processing device by the connection device to a public network using a channel resource of the set data processing device.

13. (Original) The method for controlling a data communication of claim 10, wherein the step of setting the communication path further comprises the steps of:

requesting a path setting request message in the base station controller and switching system by the connection device to public network data;

connecting to the public network of the base station controller and switching system and informing the main processing device of the connection result through the connection device to public network data;

requesting a path setting request message in the connection device to the public network data by the base station controller and switching system; and

setting a data path of the connection device to public network data and the data processing device using a channel resource of the set data processing device by the connection device to public network data.

14. (Original) The data communication control system of claim 3, wherein said main processing device further provides system control information to a system user.

15. (Original) The data communication control system of claim 1, wherein said base station controller and switching system further comprises:

a selector vocoder controller;

a data communication radio link protocol unit; and

a vocoder.

16. (Original) The data communication control system of claim 15, wherein said selector vocoder controller further comprises a buffer having a size of 21 bytes, and a queue comprised of 265 entries.

17. (Original) The method for controlling a data communication of claim 11, wherein the calling party is a mobile station and the called party is a land station.

18. (Original) The method for controlling a data communication of claim 12, wherein the calling party is a land station and the called party is a mobile station.

19. (Original) The method for controlling a data communication of claim 13, wherein the calling party and the called party are mobile stations.

20. (Original) The data communication control system of claim 2, wherein the communication device is one of a modem and a mobile telephone.

21. (Original) The data communication control system of claim 1, further comprising a base station coupled to said base station controller and switching system; and

a public network coupled to said base station controller and switching system.

22. (Original) The data communication control system of claim 21, further comprising a mobile telephone which transmits and receives data signals to and from said base station; and

a first personal computer coupled to said mobile telephone by a serial input/output port.

23. (Original) The data communication control system of claim 22, further comprising a modem coupled to said public network; and

a second personal computer coupled to said modem.

24. (Original) The data communication control system of claim 3, wherein said data processing device further comprises:

a main controller coupled to said main processing device;

a protocol processor which transmits and receives mobile data;

a modem processor which transmits and receives data to and from the public network; and

an application interface controller coupled to said main controller which interfaces data between said protocol processor and said modem processor.

25. (Previously amended) The data communication control system of claim 24, wherein said protocol processor further comprises:

a transmission controller coupled to said application interface controller;

an inter-terminating point link controller, which builds a protocol stack;

a transmission ~~interruping~~ interrupting unit, which transmits data from a public network subscriber to a mobile communication subscriber;

a reception interrupting unit, which transmits data from the mobile communication subscriber to the public network subscriber;

a transmission frame forming or releasing part, which forms or releases a frame of transmission/receiving data; and

a selector ~~vocorder~~ vocoder control module (SVCM), which manages signaling with a selector ~~vocorder~~ vocoder of said base station controller and switching system.

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26. (Original) A data communication control system of claim 24, wherein said modem processor further comprises:

a modem controller coupled to said application interface controller; a transmission interrupting unit, which transmits data from a mobile communication subscriber to a public network subscriber;

a reception interrupting unit, which transmits data from the public network subscriber to the mobile communication subscriber; and

a modem and modem controller coupled to said public network.

27. (Original) A data communication system, comprising:

a first communication device having a first data transfer protocol;

a second communication device having a second data transfer protocol; and

a communication network which exchanges data between said first communication device and said second communication device, wherein the first data transfer protocol and the second data transfer protocol are different.

28. (Original) The data communication system of claim 27, wherein said first communication device comprises a first computer coupled to a mobile telephone.

29. (Original) The data communication system of claim 28, wherein said second communication device comprises a second computer coupled to a modem.

30. (Original) The data communication system of claim 27, wherein said communication network comprises:

a mobile data communication control system which protocol processes the data from said first and second communication devices such that the data can be exchanged between said first and second communication devices; and

a base station controller and switching system which directs the data to and from said mobile data communication control system.

31. (Original) The data communication system of claim 30, further comprising:

a base station in communication with said first communication device and said base station controller; and

a public network in communication with said second communication device and said base station controller.

32. (Original) The data communication system of claim 31, wherein said base station is in wireless communication with said first communication device.

33. (Original) The data communication system of claim 30, wherein said mobile data communication control system further comprises:

a connection device to mobile data, coupled to transfer data to and from said first communication device via said base station controller and switching system;

a connection device to public network data coupled to transfer data to and from said second communication device via said base station controller and switching system;

a main processing device;

a switching device; and

a data processing device.

34. (Original) The data communication system of claim 27, wherein said first data transfer protocol corresponds to CDMA.

35. (Previously presented) A data communication control system in a mobile communication system, comprising:

a base station controller and switching system which determines a communication path which selectively provides a voice communication service or a data communication service in response to a call request requested by a calling party, and outputs data and signals which control call connection between the calling party and a called party through the determined communication path; and

a data control system which selectively modulates and demodulates data from said base station controller and switching system by performing protocol communication with said base station controller and switching system,

wherein a format of a data frame used for communication between said base station controller and switching system and said data control system comprises a first field which provides information required for said base station controller and switching system, a second field which provides information required for communication between said base station controller and switching system and said data control system, a third field which provides transmission data and control information during data communication between said base station controller and switching system and said data control system, and a fourth field which represents an end of the transmission data.

36. (Previously presented) The data communication control system of claim 35, wherein said third field comprises:

a fifth field which represents a transmission type of data sent to a radio period;

a sixth field which represents a traffic information type;

a seventh field which represents a control signal code; and

an eighth field which represents a control number of the data frame.

37. (Previously presented) A method for controlling a data communication between a calling party and a called party in a communication system, comprising:

informing arrival of a call setting request message in response to a call request signal of the calling party;

identifying a type of a call;

assigning a modem resource suitable for the type of call;

performing protocol communication between a data processing device and the calling party using link resources provided between a base station controller and switching system and a connection device to mobile data;

connecting to the called party through a channel resource;

setting a communication path based on a connection state; and

performing data communication between the calling party and the called party through the communication path.

38. (Previously presented) The method for controlling a data communication of claim 37, wherein setting the communication path further comprises:

requesting a path setting request message;

connecting to a public network; and

informing a main processing device of a connection result.

39. (Previously presented) The method for controlling a data communication of claim 37, wherein setting the communication path further comprises:

requesting a path setting request message; and

setting a data path of the connection device.

40. (Previously presented) The method for controlling a data communication of claim 37, wherein setting the communication path further comprises:

requesting a path setting request message;

connecting to a public network of the base station controller and switching system;

informing a main processing device of a connection result;

requesting a path setting request message; and

setting a data path of the connection device.

41. (Previously presented) The method for controlling a data communication of claim 38, wherein the calling party is a mobile station and the called party is a land station.

42. (Previously presented) The method for controlling a data communication of claim 39, wherein the calling party is a land station and the called party is a mobile station.

43. (Previously presented) The method for controlling a data communication of claim 40, wherein the calling party and the called party are mobile stations.